

FURTHER EXCAVATIONS AT SITE N38/30, MOTUTAPU ISLAND, NEW ZEALAND

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Abstract. During the 1970/71 season additional excavations at site N38/30, an undefended site on Motutapu Island, provided the remaining information required to define all the structural features belonging to one of the occupation terraces.

In the summer of 1970/71 two weeks were spent extending the excavation at site N38/30 to uncover all occupation features on one of several terraces which constitute the site (Fig. 1). The terrace had been partly excavated during the 1967/68 season and the results described (Leahy 1970). In 1970/71, excavations were continued in the north and east portion of the terrace.

Two further areas were opened, employing the original grid, and numbered squares 3 and 4 (Fig. 2). Square 3 was a 4 m square reduced by 1 m baulks left along the west and south lines. Square 4 extended north and east of square 3 as a 2 x 2.5 m unit. Subsequently some extensions were made to explore various features exposed during excavation.

Datum was re-established 20 cm above the turf at point "Z" (Figs. 2 and 4).

DESCRIPTION OF LAYERS AND FEATURES

(Figs. 3 and 4)

The layers encountered were consistent with those established during the previous excavation, and where present have been given the same numbers (cf. Leahy 1970, pp. 62 - 67). Layer 3 was absent from both squares, while layer 2 was present only in an extension to square 3.

The remaining layers, 1 and 4 to 8 were present in both squares.

Layer 1. Square 3. This consisted of the natural clay base which formed a flattish surface sloping gradually to the south side of the square. Various pits and postholes had been dug into it. In the north-east corner was one edge of a pit (pit 4, Fig. 3) with a floor 50 cm below the clay surface at a depth of 120 cm below datum. The pit, filled with layer 6, extended into square 4.

Cutting across the south-east corner of the square was part of a shallow pit (pit 5, Fig. 3) with a floor 30 cm below the clay surface and 126 cm below datum. One of its corners appeared just inside the square close to the south baulk.

Extensions were made to the south-east of square 3 to expose the east end of this pit. The first extension, 1 x 0.5 m, set out at an angle, revealed that the pit terminated in a low rounded bank into which had been dug a large posthole (post-hole 5). A further extension, 50 x 60 cm, defined this posthole.

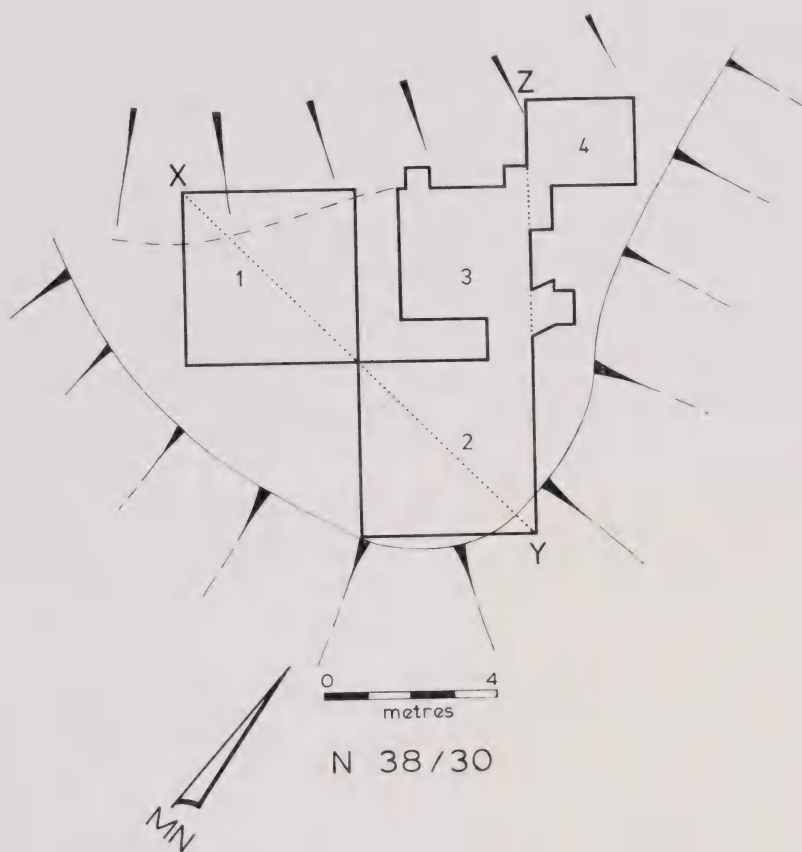
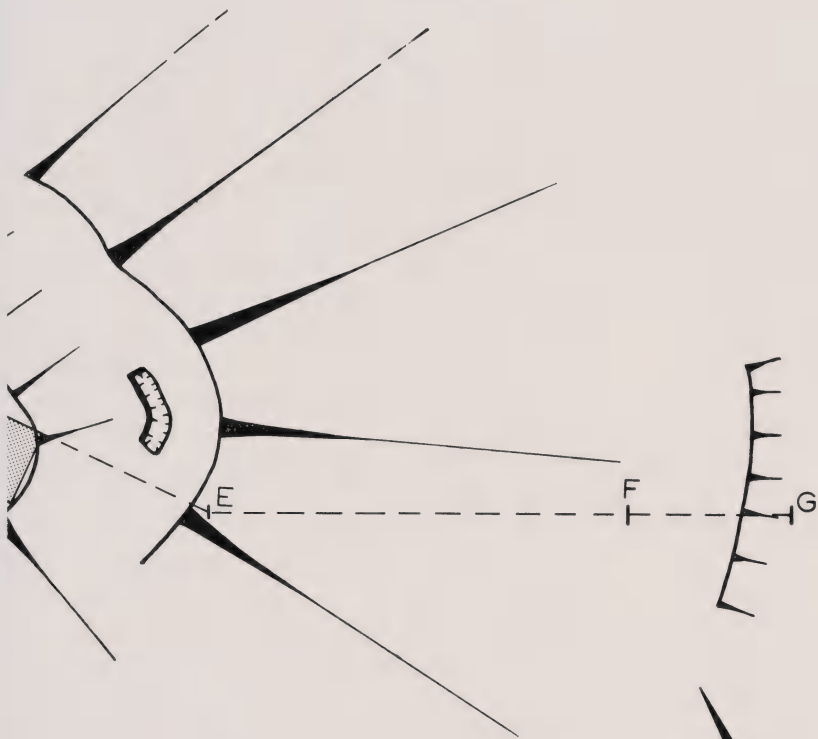


Fig. 2. Ground plan of excavated area, N38/30.

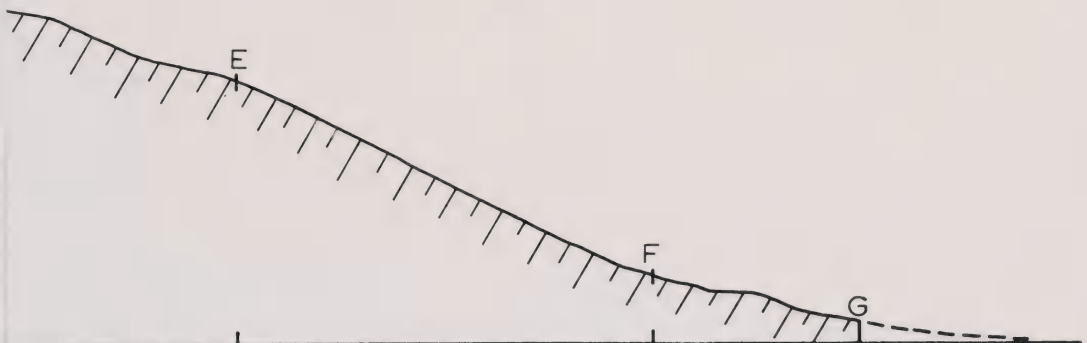
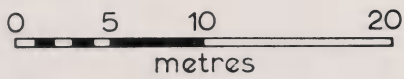
Another extension in the form of a 1 m square through the east portion of the south baulk permitted the other edge of pit 2, first encountered in square 2, to be established. However, the fill of this pit was not excavated as time did not permit.

Pit 5, when fully defined, was 1 m wide and 1.6 m long. The north edge and part of the west edge were straight sided but on the south side the edges were more indistinct and rose as a low bank which then sloped down to where the fill of pit 2 commenced. At the north-east end, the edge became less distinct and curved round to join the raised edge of the large posthole. It appeared that the posthole had been dug into the natural and the pit later dug below the clay surface so that the pit edge in that area was formed by the lip of the posthole. The east end of the south wall just showed as a slight edge in the baulk extension and suggested a continuation of the rounded edge further back.

Within pit 5 were four postholes. Posthole 1 was centrally placed. It was 10 cm in diameter, 15 cm deep and 155 cm below datum at its deepest point. It was filled with blackish earth and clay rubble. Posthole 2 at the west end was inserted into the bank of the pit so that the west edge of the hole was higher than the east side. It was 20 cm across, 20 cm deep and 134 cm below datum. It was filled with a



N 38 / 30



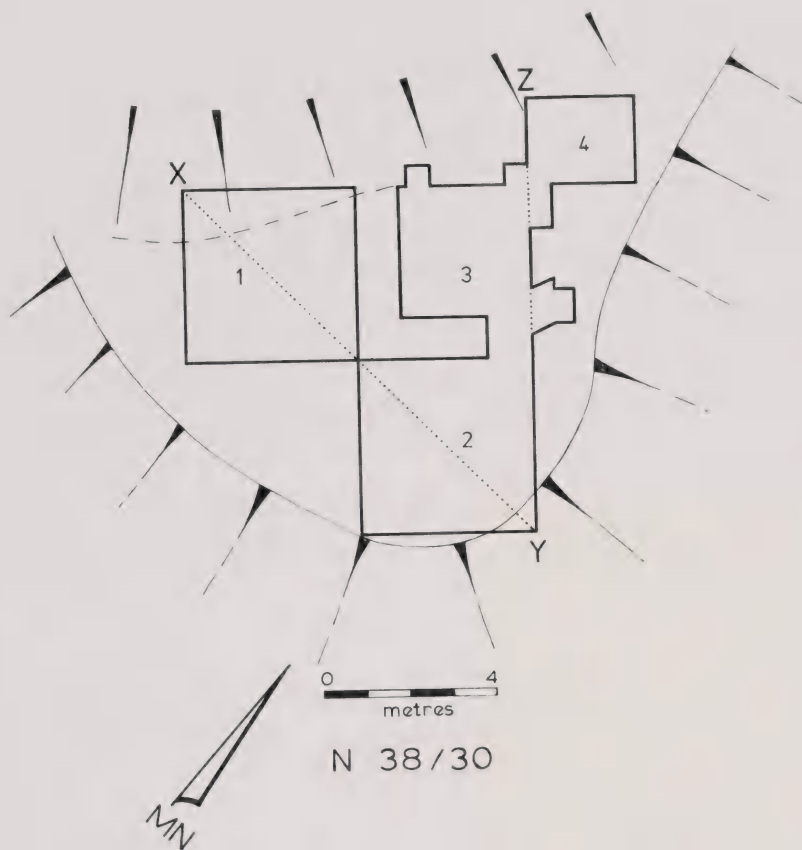


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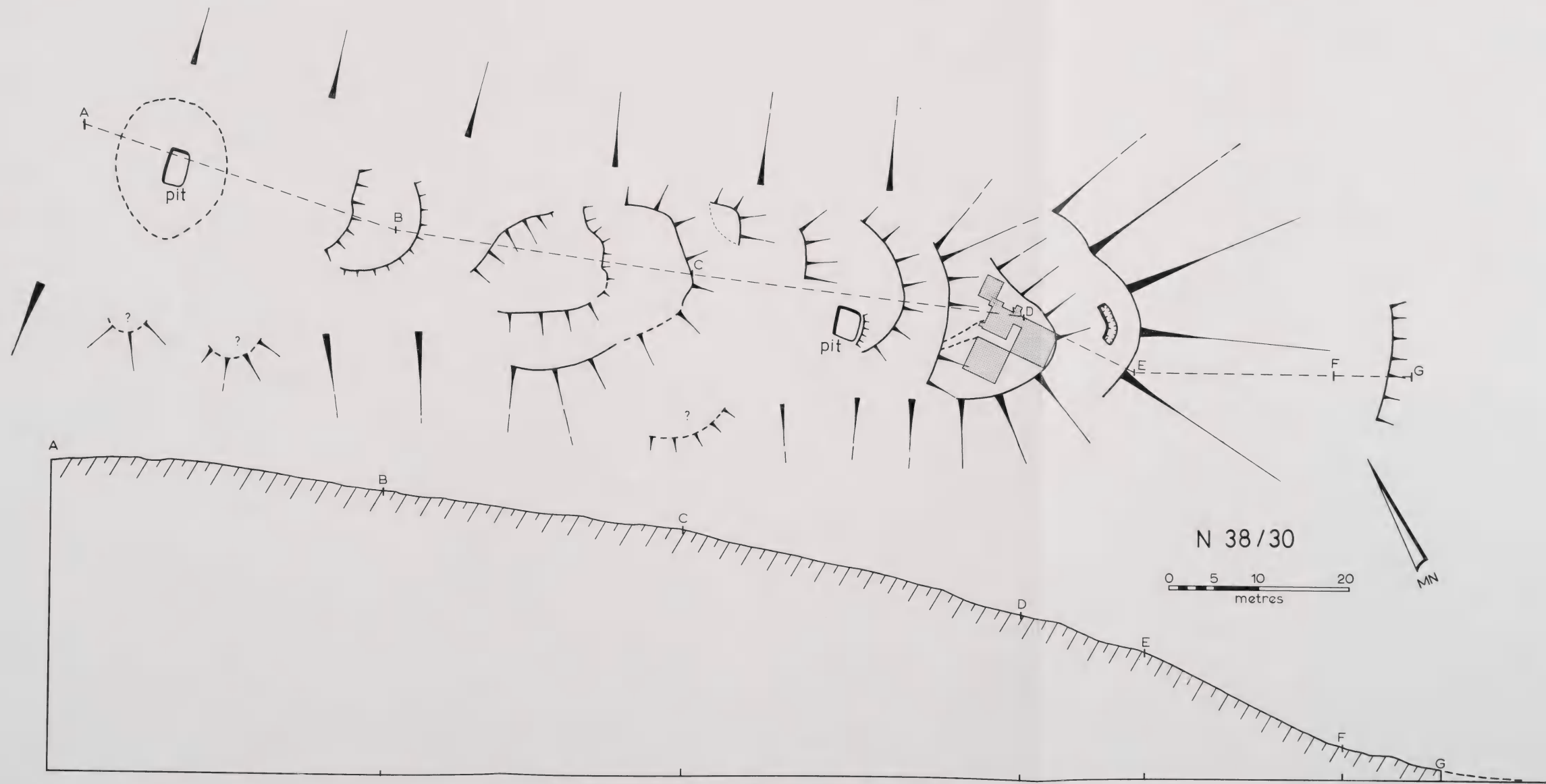


Fig. 1. Longitudinal survey plan of ridge on which site N38/30 is situated.

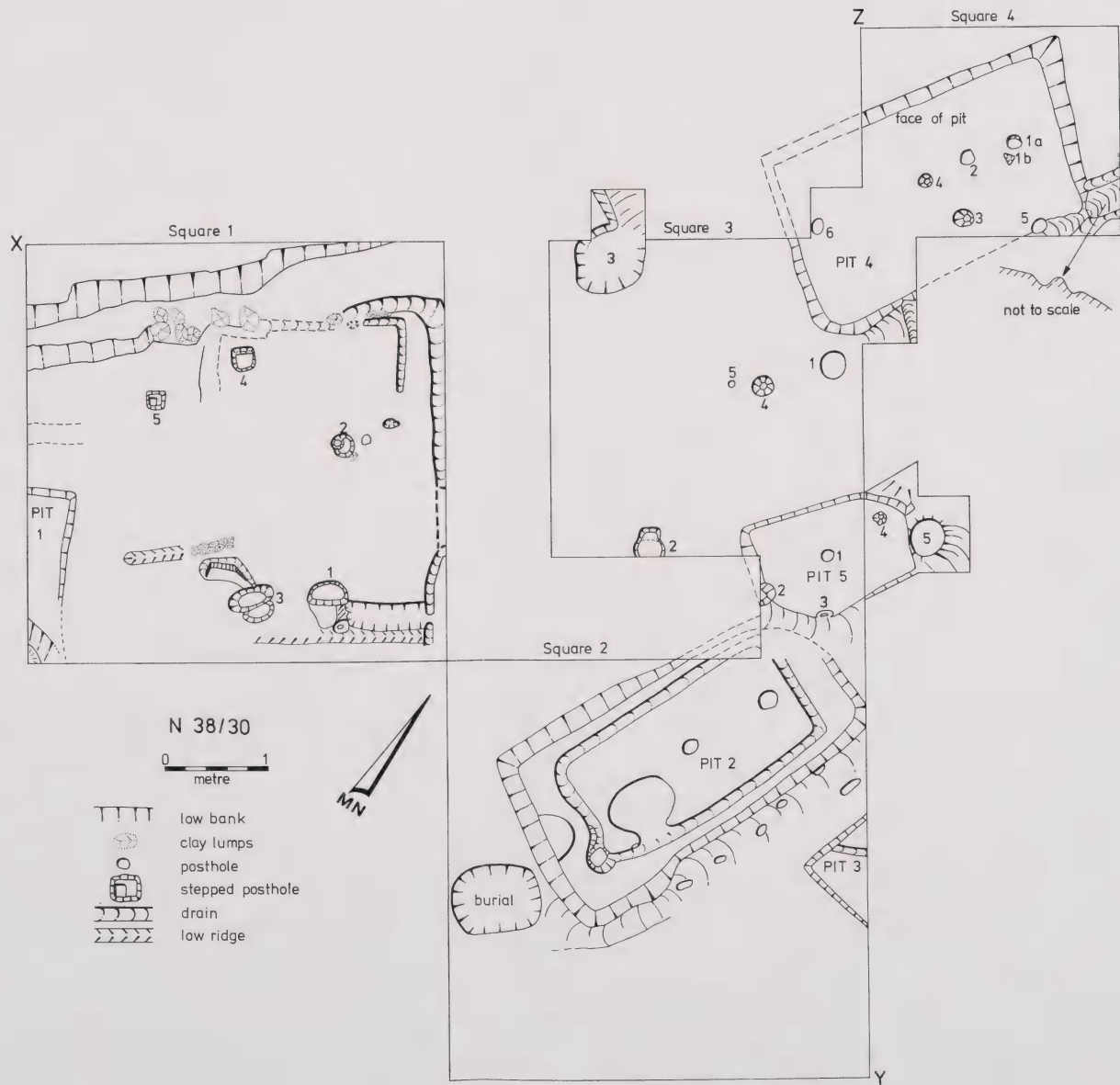


Fig. 3 Plan of features revealed by excavation, N38/30.

brownish sandy and clay rubble. Posthole 3 was more slot-like and was situated at the rounded edge of the south bank. It was 16 cm long, 8 cm wide and 10 cm deep. It narrowed to a flat point at 148 cm below datum. The fill was similar to posthole 2. Posthole 4 was placed to the north of the central line. It was 12 cm across, 14 cm deep and 154 cm below datum, and was filled with a brownish black earth and fine clay rubble.

Posthole 5, situated just outside pit 5, was 32 cm across, 36 cm deep and 166 cm from datum. It was filled with brownish grey rubble.

Other features in square 3 were two postholes and a basin-shaped depression. Posthole 1, in the flattish clay floor near the east baulk and just outside the corner of pit 4, was filled with a brownish green material containing some midden. This same material appeared in the baulk and extended a short way out over the square, filling and covering the hole. This hole was 26 cm across, 16 cm deep and 96 cm below datum.

Posthole 2 was a shallow square-stepped hole similar in shape to those in square 1 that were associated with the house structure. It measured 20 cm across, 6 cm deep and was 104 cm below datum. It had a very thin layer of brownish green material in the lower portion and then was filled with black layer 6.

Postholes 4 and 5, near the centre of the square, were associated with layer 6.

Layer 1. Square 4. Pit 4 occupied most of this square, although in the north and east were exposed portions of the scarp bank into which the corner of the pit had been dug. The pit was 3 m long and 1.7 m across. The floor was 1.26 m below datum in the central area and sloped slightly to the south to 1.3 m below datum. It was deepest in the south-east corner (1.34 m) suggesting that drainage, if necessary, would occur at that end of the pit. Unlike pit 2, it contained no artificial drain in the floor surface.

Pit 4 contained seven features, six postholes and one dip in the south-east wall.

Posthole 1a was 16 cm across, 40 cm deep and 166 cm below datum in its deepest part. It was filled with rubbly grey clay and two broken stones deep in the hole, with a thin upper layer of black earth (layer 6) which extended into a "V-shaped" hole (1b) near it. The latter hole cut back into posthole 1a and was filled with the black earth of the layer 6 fill of the pit. Posthole 2 was 14 cm across, 39 cm deep and 164 cm below datum. Its fill was similar to that of 1a. Posthole 3 was 20 cm across, 27 cm deep, 153 cm below datum and was angled, the bottom of the hole being 3 - 4 cm south of the lip of the hole. Its fill consisted of rubbly clay below and a few clay lumps above. Posthole 4 was in line with holes 1 and 2 but slanted in the same direction as hole 3, although not as sharply. It was 14 cm across, 16 cm deep and 142 cm below datum. The hole was packed with small lumps of clay and may have been deliberately filled. The top few centimetres were covered with layer 6. Posthole 5 was situated at the base of and partly dug into the bank at the east end of the south wall of the pit. It was 16 cm across, 19 cm deep and 153 cm below datum. It had been tightly packed with clay lumps and its full extent was only discovered when a piece of stone was found to extend deep into the wall of what had been thought to be a stakehole. Posthole 6 was uncovered when a 50 x 50 cm extension was cut in the baulk at

the west end of square 4. It was oval shaped, 16 cm across, 29 cm deep and 155 cm below datum. It was in line with posthole 1 along the long axis of the pit. The fill was a rubbly grey-brown earth with clay bits.

The other feature was a depression just beyond the wall of the pit at the south-east end. The height of the pit wall dropped on the east side to about 8 cm and then rose again to about 24 cm above the floor. Careful investigation failed to show any direct opening to allow drainage from the pit into the depression outside although the pit was deepest in that corner.

The north-west corner of pit 4 and part of the south wall were not excavated, although a final 1 x 0.5 m extension in the south-west corner of square 4 exposed the south-west corner of the pit. The bank edge, about 24 cm high at this point, rose to a height of about 50 cm in the north-east corner of square 3, where it entered the baulk.

Layer 2. Square 3. This was a greenish brown sandy material, identified as Rangitoto ash. There was no trace of it in square 3 but it appeared as a thickish contoured overlay on the clay natural at the east end of the angled extension in the deep hollow behind the large posthole (5). It did not reach into the pit itself. It was covered by layer 6.

Layer 4. Square 3. A brownish green material containing some midden material appeared in the east wall of the square. It formed a thin layer extending about a square metre out over the clay and filling posthole 1 and pit 5.

Layer 4. Square 4. A rather thick layer of what appeared to be Rangitoto ash rested in the hollow behind the pit edge in the south-east corner of the square. It contained some charcoal flecks and a half pipi shell near the clay natural showing that it had been redeposited. The east floor behind the pit where the bank dropped away showed an increasing depth of material. It was probably deposited down the slope when the pit was being built.

Layer 5. Square 3. Butting against the west wall of pit 4 was what appeared to be a buttress consisting of lumps of clay pressed together. The lumps did not seem to form a solid mass and were eventually removed. The flat floor of the pit beneath showed a thin grey layer of water washed clay and earth. This buttress-like feature might have been formed by clay lumps falling from the bank edge after abandonment of the pit; against this interpretation, however, is the fact that the bank appeared stable and straight in this area. Alternatively, the feature could have been an off-centre, unfinished buttress, representing a second use of the pit, and so corresponding to the secondary floor (layer 5), previously found in square 2 (Leahy 1970, p. 66).

Layer 5. Square 4. Between postholes 1, 2, 3, and 4 in pit 4 was a solidly packed clay pan, overlying a thin layer of grey-yellow earth similar to the water-deposited silt found under the possible buttress at the west end of the same pit and under the redeposited floor of pit 2. This pan of clay could possibly have been the residue removed from one of the postholes in pit 4 when there was some realignment or rearrangement of the structures associated with the pit.

Layer 6. Square 3. This covered the whole square and extensions. Towards its base clay particles were more frequent while all the pits contained a considerable number of clay lumps ranging from about 10 cm in diameter down to fine rubble interspersed with black soil, midden material, charcoal scraps and *haangi* stones. These lumps were probably from natural weathering of the bank edges. Layer 6 was fairly thin where it was distributed over the flattish surface of the square, but formed the main fill of pit 4.

In the south-east corner of the square, over and also a bit back from the fill of pit 5, was an irregular clay walling consisting of two interjoined square areas and a squarish internal depression. This contained a circular collection of *haangi* stones. The walls were very fragile and it was impossible to prevent the clay lumps from crumbling in most parts as they were excavated. No function was indicated except possibly as an edge or windbreak for the *haangi* on the south side. Because one of the small enclosures faced north and the other west, while the walling was not more than 15 cm high, interpretation as a windbreak seems unlikely. The walls rested on layer 6 material. Part of this clay area continued on into the 1 m extension where layer 6 covered pit 5.

Posthole 4 appeared to have been dug from a surface within layer 6. In its deepest part it was dug into the clay floor to a depth of 12 cm and filled with layer 6. It was oval in shape, 14 cm x 18 cm, and sloped inwards, terminating in a small central depression. It was 92 cm below datum at its deepest point. About 40 cm west of this was a stake hole also associated with layer 6. This entered the clay to a depth of about 5 cm.

Small amounts of shell and bone were found scattered throughout layer 6. In the eastward extension of square 3, dug to establish the corner of pit 4, was a discrete collection of bird and rat bone.

Layer 6. Square 4. This covered the whole square and formed the bulk of the fill of pit 4. On four occasions *haangi* or firepits were dug in the fill; one at the west end, one in the middle (a small collection of midden material was found associated with this), and two in the same spot on the south side. Clay lumps, probably from the partially exposed banks, helped to fill the pit during the build up of layer 6. A narrow depression at the east end of the square and partly in the baulk, formed a depression in the clay bank at the back of the pit. It was not well defined and could possibly have been a root hole. Layer 6 in this square contained a number of *haangi* stones.

Layer 7. Squares 3 and 4. This layer covered the site and was difficult to distinguish from the turf covering. It contained a number of stones. In square 4 it sealed off layer 6 and filled features dug into it in three places. There was a large firepit with orange brown ash above and black ash and charcoal below similar to that previously described for layer 7, square 2. Two other small firepits were encountered near-by in the central part of the shallow depression in pit 4.

Layer 8. Squares 3 and 4. Layer 8 consisted of the turf which covered the entire surface of the site.

ARTIFACTS

One small squarish grinding stone (*hoanga*) was found in layer 6, square 3, towards the south end of the west baulk. It measured 7 x 7 x 3 cm. One corner

showed evidence of abrasion or wear as a smoother depressed area, suggesting that it had been used on smaller rather than larger objects. If the stone was held in the hand only one quarter of it would be exposed and available for use.

No obsidian was found in this excavation. One greywacke flake, 3 x 3 cm, was found in the layer 4 fill of pit 5.

One small piece of pumice, found in layer 1, square 3, was identified as Loiseles pumice by B.P. Kohn (pers. comm.) who described this type as "... usually a dark pumice containing light and dark bands." The pumice must have been carried to the site although its transportation could have been incidental to some other material.

MIDDEN

Shell

Most shells found were in a fragile condition. Because of this they could not be properly cleaned and were not weighed. The number of shells present is given in Table 1. The shells tended to be in the small to medium range rather than large.

Table 1. Occurrence of all shells by number in layers 4 and 6, Squares 3 and 4, N38/30.

| SHELL SPECIES | LAYER 4 Square 3 | LAYER 4 Square 4 | LAYER 6 Square 3 | LAYER 6 Square 4 |
|------------------------------------|---------------------|---------------------|---------------------|---------------------|
| Rocky shore species | | | | |
| <i>Cellana radicans</i> | — | — | — | present |
| <i>Cookia sulcata</i> | — | — | — | 5 |
| <i>Crassostrea glomerata</i> | — | — | — | 2 |
| <i>Haliotis sp.</i> | — | — | present | present |
| <i>Hiatella arctica</i> | — | — | — | 1 |
| <i>Lunella smaragda</i> | 13 | — | 36 | 271 |
| <i>Maoricrypta constata</i> | 1 | — | — | 4 |
| <i>Mytilus sp.</i> | present | — | — | 3 (½ shells) |
| <i>Neothais scalaris</i> | 1 | — | present | 12 |
| <i>Zediloma arida</i> | — | — | present | 12 |
| Sandy shore/mudflat species | | | | |
| <i>Amphidesma australe</i> | 1 (R. valve) | 1 (½ shell) | 6 (R. valve) | 39 (R. valve) |
| <i>A. subtriangulatum</i> | — | — | 1 (½ shell) | 2 (½ shells) |
| <i>Chione stutchburyi</i> | present | — | 8 (L. valve) | 24 (L. valve) |
| <i>Cominella sp.</i> | — | — | present | 2 |
| <i>Dosinia sp.</i> | 1 (½ shell) | — | present | 1 (½ shell) |
| <i>Maoricolpus sp.</i> | — | — | — | 11 |
| <i>Pecten novaezelandiae</i> | — | — | present | present |

A single valve of *Hiatella arctica* was found in layer 6, square 4. This small shell nestles in crevices of all kinds, for example in holdfasts of kelp and crevices of larger shells (A.W.B. Powell, pers. comm.); Morton and Miller (1968, p. 224)

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MIDDEN

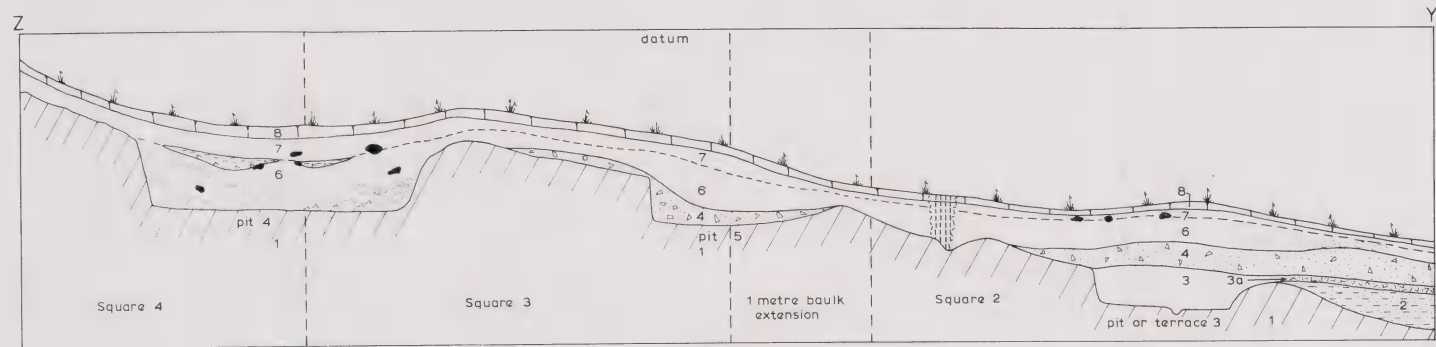
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|------------------------------------|---------------------|---------------------|---------------------|---------------------|
| Rocky shore species | | | | |
| <i>Cellana radicans</i> | — | — | — | present |
| <i>Cookia sulcata</i> | — | — | — | 5 |
| <i>Crassostrea glomerata</i> | — | — | — | 2 |
| <i>Haliotis sp.</i> | — | — | present | present |
| <i>Hiatella arctica</i> | — | — | — | 1 |
| <i>Lunella smaragda</i> | 13 | — | 36 | 271 |
| <i>Maoricrypta constata</i> | 1 | — | — | 4 |
| <i>Mytilus sp.</i> | present | — | — | 3 (½ shells) |
| <i>Neothais scalaris</i> | 1 | — | present | 12 |
| <i>Zediloma arida</i> | — | — | present | 12 |
| Sandy shore/mudflat species | | | | |
| <i>Amphidesma australe</i> | 1 (R. valve) | 1 (½ shell) | 6 (R. valve) | 39 (R. valve) |
| <i>A. subtriangulatum</i> | — | — | 1 (½ shell) | 2 (½ shells) |
| <i>Chione stutchburyi</i> | present | — | 8 (L. valve) | 24 (L. valve) |
| <i>Cominella sp.</i> | — | — | present | 2 |
| <i>Dosinia sp.</i> | 1 (½ shell) | — | present | 1 (½ shell) |
| <i>Maoricolpus sp.</i> | — | — | — | 11 |
| <i>Pecten novaezelandiae</i> | — | — | present | present |

A single valve of *Hiatella arctica* was found in layer 6, square 4. This small shell nestles in crevices of all kinds, for example in holdfasts of kelp and crevices of larger shells (A.W.B. Powell, pers. comm.); Morton and Miller (1968, p. 224)

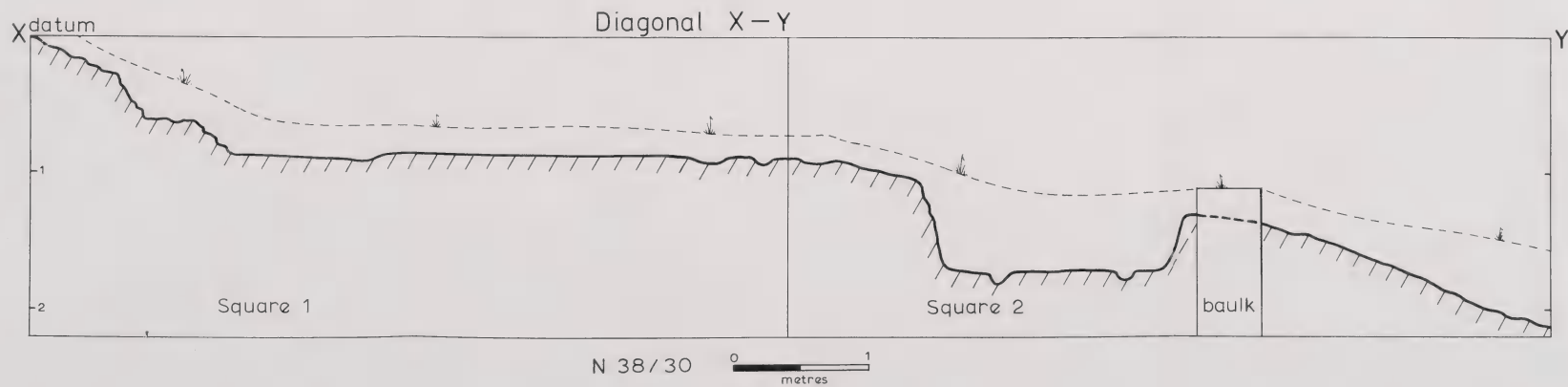


- | | | | | | |
|-----|---|---|--|--|---|
| 8 | Topsoil | 3 | Greenish brown with a little ash midden and charcoal | | Stones |
| 7 | Humus | 2 | Green brown sterile ash (Rangitoto ash) | | Reddish orange ash with charcoal ash below. |
| 6 | Gray black humus speckled with clay | | Natural clay | | Charcoal and black ash |
| 4 a | Brown green fill with some bone and shell | | Clay lumps | | Disturbance |

0 1
metre N 38/30

CROSS SECTION THROUGH SITE.
Z—Y

Fig. 4. Cross-section through site, N38/30.



N 38/30 0 1
metres

Fig. 5. Diagonal through site showing elevation, N38/30.

also described it as a kelp dwelling species. This shell could indicate the use of kelp on the site.

In the fill of the pit in square 4 was a small depression which contained a collection of shells and fish bones. This could be the debris of one meal. The fish bone included two snapper (*Chrysophrys auratus*) upper pre-maxillae from small fish weighing probably not more than 1.36 kg (3 lbs). The shell content (which is included in Table 1) is shown in Table 2.

Table 2. Occurrence of shell in depression in pit fill, Square 4, N38/30.

| | |
|------------------------------|---------------------------|
| Rocky shore species | |
| <i>Cookia sulcata</i> | 3 |
| <i>Crassostrea glomerata</i> | 1, $\frac{1}{2}$ shell |
| <i>Haliotis</i> sp. | broken pieces |
| <i>Hiatella arctica</i> | 1 valve |
| <i>Lunella smaragda</i> | 154, mainly small shells |
| <i>Maoricrypta</i> sp. | 2 |
| <i>Mytilus</i> sp. | 1, $\frac{1}{2}$ shell |
| <i>Neothais scalaris</i> | 7, 1 very small |
| <i>Zediloma</i> sp. | 5 |
| Sandy shore/mudflat species | |
| <i>Amphidesma australe</i> | 21 (right valves counted) |
| <i>A. subtriangulatum</i> | 1, $\frac{1}{2}$ shell |
| <i>Chione stutchburyi</i> | 9 (left valves counted) |
| <i>Cominella</i> sp. | 2 |
| <i>Dosinia</i> sp. | 1, $\frac{1}{2}$ shell |
| <i>Maoricolpus</i> sp. | 7 |
| <i>Pecten novaezelandiae</i> | broken pieces |

Bone

Most of the fish bone present in the site was snapper (*Chrysophrys auratus*) but parts of a barracouta jaw (*Thyrstites atun*) were found in layer 6, square 4. The opercular cover of an unidentified fish (not snapper) was found in layer 6, square 3. Identifications were made by Mr A. B. Stephenson.

Just below the turf in layer 7, square 3, the skeleton of a small lamb was found. It appeared to be of recent origin.

Part of the proximal end of a left humerus of a young dog was found in the fill of pit 5, layer 4, in the south extension of square 3.

Rattus exulans limb bones, probably from one individual (R.J. Scarlett, pers. comm.) were found in the east extension of square 3, just at the edge of pit 4 in the layer 6 fill. Associated with the rat bones were several bird bones which have been identified by R.J. Scarlett (pers. comm.) as the left humerus of a marsh crake (*Porzana pusilla affinis*), and several bones of an unidentified Passeriform or perching bird, probably from one individual.

Stone

Both *haangi* stones and assorted local stones showing no obvious evidence of use as *haangi* stones were found in the excavation. Distribution of both kinds is shown in Tables 3 and 4.

Table 3. Occurrence of stone other than *haangi* stones, Squares 3 and 4, N38/30.

| | | |
|------------------------------------|-----------|--------|
| Square 3, south extension, layer 4 | greywacke | 57 gm |
| Square 3, layer 6 | assorted | 402 gm |
| Square 4, layer 6 | assorted | 634 gm |

Table 4. Occurrence of *haangi* stones, Squares 3 and 4, N38/30.

| | SQUARE 3 | | SQUARE 4 | |
|-----------|---------------|---------------|---------------|---------------|
| | Layer 6 kg | Layer 7 kg | Layer 6 kg | Layer 7 kg |
| Fractured | 23.5 | 3.0 | 34.75 | 7.0 |
| Pebble | 16.0 | 6.0 | 43.25 | 4.5 |
| Total | 39.5 | 9.0 | 78.0 | 11.5 |

DISCUSSION

The 1970/71 excavation, while confirming the previous results, added new information about the extent and types of features on the site (see Fig. 3).

The first excavation results (squares 1 and 2) had suggested that the terrace originally dug into the ridge contained a surface house structure which was subsequently modified and a semi-subterranean storage pit with a buttress, two postholes, and an internal drain. The pit was also subsequently modified. Sealing these features was a black earth layer, layer 6, which contained numerous stone flakes, adzes and other artifacts. A subsequent more restricted occupation was indicated by fire pits in the surface of layer 6.

The two 1971 squares, squares 3 and 4, extended the excavated area by 7 square metres. The original occupation in square 3 (layer 1) consisted of a flattish weathered clay surface about 2.5 metres square which contained few structures, these being mainly on the periphery of the square. The flattish area suggested a courtyard bounded by the scarp of the bank, pit 2 and pit 5 on the south and pit 4 on the east side. On the west would have been the house structure. A path down the ridge ran between the house and the courtyard. A diagonal cross-section (Fig. 5) through squares 1 and 2 (Figs. 2 — X — Y) shows the relative elevations of the house, corner of the courtyard and pit 2.

The courtyard area would have been sheltered, secluded and a suitable centre for the activities associated with the settlement. A stamped path led from the front of the house, which faced south, to the ridge path on the west side of the courtyard. The house and all the pits encircled the courtyard.

The principal layer 1 feature in square 4 was pit 4 with its aligned central postholes. Part of the edge of the terrace scarp was also in this square.

Downslope from pit 2 and dug into Rangitoto ash (layer 2) were several *haangi* and fire pits. These were filled with layer 3 material, mostly Rangitoto ash, stones, charcoal and some midden. Then a similar material, layer 4, appeared with the same type of inclusions but with the Rangitoto ash more mixed with other soils. This area appeared to be the cooking area for the first occupation. It was eventually covered by layer 6 material.

Pit 5 was probably dug a little later when features associated with the first occupation were modified. The size of posthole 5 suggests that a large single post held up a structure, such as a small high storehouse (*whata*). As pit 5 was shallow and small (1.5 x 1 m), it may have been used for a storage hut, or the posts could have carried a drying or storage rack. The sinking of the pit into the clay and a small gap in the east wall by posthole 5 would allow water from any structure to drain away east rather than flow over the low bank and into the corner of pit 2.

Feature 3, square 3 did not seem to have any obvious purpose. The cut back into the bank at the west side of the basin may have been some sort of drainage channel which would direct water from the bank into the clay depression. It was very shallow but any rain would come directly down the bank to fill it. It would hold enough water for drinking, being 60 cm in diameter and about 10 cm deep, but would soon dry out in the summer.

Pits 1 and 3, previously described (Leahy 1970, pp. 63 and 65), were shallow. Neither was fully excavated. Both appeared near the edges of the terrace. Their function is unknown. Pit 1 was aligned with the house in a north-south direction. Pit 3 was aligned with pits 2, 4 and 5, in an east-west direction.

No artifacts were found in direct association with the first occupation during the 1970/71 excavation, although some were found in the previous excavation. The initial stage of the first occupation reflects a living and storage function with little evidence for a working area, apart from the cache of adzes and roughouts found by the edge of the house (Leahy 1970, p.71).

The alteration to the arrangement of the postholes associated with the house structure without any obvious abandonment for a length of time suggests that in some way the house was unsatisfactory and that some changes were necessary.

Differences also appear between the postholes in the pits and those in the house. All the main house posts were stepped, usually with a squarish or oval outline. One isolated posthole in square 3 (posthole 2) was similar to those in the house. The majority of holes in the pits were unstepped rounded ones. Posthole 2 in pit 5 was an exception but as this formed part of the bank edge of the pit it may have required extra support.

Differences between pits 2 and 4 in the depth of the postholes and the presence or absence of drains seemed significant. Allowing that excavation of a posthole presents problems in establishing its real depth, the holes in pit 4 were generally deeper than those in pit 2. Dimensions are given in Table 5.

Table 5. Dimensions of postholes, pits 2 and 4, N38/30.

| | POSTHOLE | Depth (cm) | Width (cm) |
|-------|----------|------------|------------|
| Pit 2 | — | 22 | 16 |
| | — | 20 | 15 |
| Pit 4 | 1a | 40 | 16 |
| | 2 | 39 | 14 |
| | 3 | 27 | 20 |
| | 4 | 16 | 14 |
| | 5 | 19 | 16 |
| | 6 | 29 | 16 |

The width of the holes averaged about 15 cm across. The increased depth might have been required to support a more substantial structure, possibly a stronger roof that was more waterproof so that a floor drain was not necessary.

Posthole arrangement, depth and the presence or absence of drains in the two contemporary pits suggest a different function for each pit. One could have been for more perishable goods and one for things needing less protection.

Layer 6, representing the next main stage in occupation, built up over the initial occupation and filled its features. This layer was found in the pits covering layers 1 and 5 without any suggestion of natural infilling, and its buildup must have begun soon after the first occupation, possibly as a continuation of it. Thus the same group of people rebuilt structures further up the ridge and used the old terrace as a stone working and *haangi* area.

The 1970-71 excavation produced practically nothing in the way of flakes or artifacts from layer 6, although the previous excavation had yielded several adzes, roughouts, hammerstones and flakes from the same layer. It would seem that only the west part of the terrace was used as a working area. The eastern side of the terrace at this time seems to have been used as a cooking area. Several *haangi* were found in layer 4, square 6, and cooking activity was also associated with the irregular clay bank in square 3. Similar midden material was associated with layer 6 in both the recent and earlier excavations.

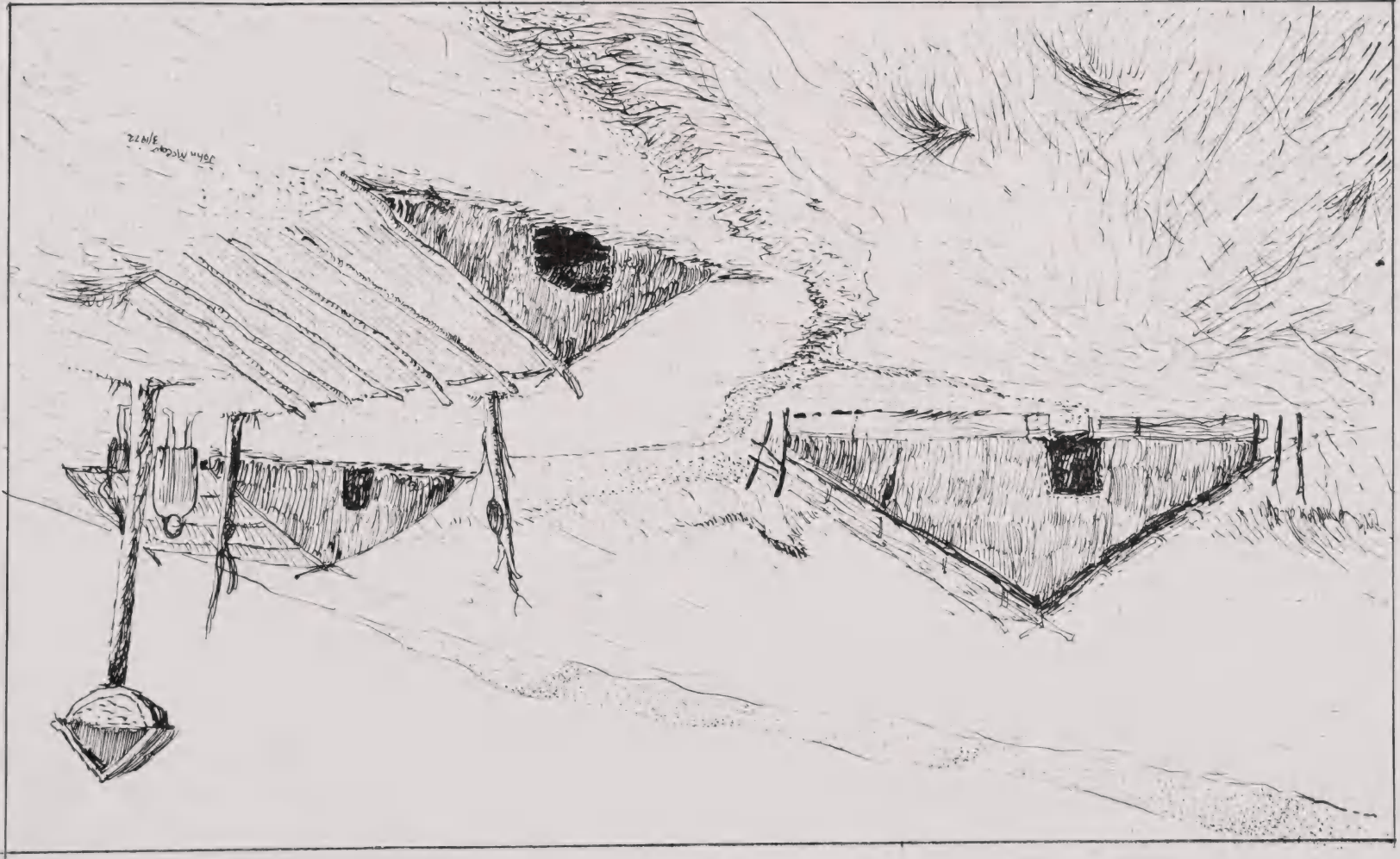
A final more restricted occupation was indicated by layer 7 firepits dug into the surface of layer 6, mainly in the top of the fill in pits 2 and 4. After this the site was finally abandoned.

CONCLUSIONS

The excavation at N38/30 took place at the end of a gently sloping spur that ran from the higher central ridge of Motutapu Island southwards towards Station Bay. The terrace was part of an extensive site on the spur which also included pits, terraces and level areas. Often these are marked only by "crop marks" in the grass which suggest alterations to the subsoil at some time.

The terrace examined was dug with the basic idea of forming an area large enough to hold a house, two pits and a courtyard. The builders therefore had to allow enough flat surface for these structures and no doubt had a preconceived idea of the site and the positions of intended structures before levelling commenced.

Fig. 6. Artist's impression of the original occupation, seen from the south-east



Other features along the spur suggest that the terrace was only one part of a larger complex of occupation although further excavation would be needed to establish whether the other features were contemporaneous with the excavated terrace.

Pits and flat areas may indicate garden plots and storage of crops. The tops of spurs and ridges would be the most suitable gardening land as the ridges fall away steeply in most cases to streams, swamps or beaches, especially in the Station Bay area. The island has a number of elongated terraces along the sides of some of the ridges and it would be interesting to know if these were used for agriculture because of their sheltered position or because of the need for more gardening areas than the top of the ridges would supply.

Figure 6 is an artist's impression of the terrace, seen from the south-east, as it may have looked, based on the original occupation ground plan (Fig. 3). The drawing is based on Augustus Earle's drawings and paintings especially his water colour of the residence of "Shulitea", Kororareka (Murray-Oliver, 1968, p. 69).

There is little evidence to suggest that activities other than living and storage were carried out on this terrace at the time of the initial occupation. However, a few flakes and the cache of adzes suggest that they were carried out elsewhere.

The second stage in occupation, associated with layer 6, changed the character of the terrace to a stone working and general activity area, with one section devoted to cooking. As no dwellings were established in this layer, they must have been on another part of the site.

The lack of soil build up between the initial occupation (layers 1 to 5) and the subsequent stage (layer 6) suggests that there was considerable activity over a short period of time in this part of the spur and several changes in living patterns. Seasonal activities may have been involved. Another possibility is the development of agriculture in the area, in which case the heavy deposit of black soil in layer 6 may have been the result of increased soil working nearby, up the slope.

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